



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,917	10/14/2003	Daniel John Smith	FPHCR.056A	3561

20995 7590 12/28/2010
KNOBBE MARTENS OLSON & BEAR LLP
2040 MAIN STREET
FOURTEENTH FLOOR
IRVINE, CA 92614

EXAMINER

PATEL, NIHIR B

ART UNIT	PAPER NUMBER
----------	--------------

3772

NOTIFICATION DATE	DELIVERY MODE
-------------------	---------------

12/28/2010

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcartee@kmob.com
efiling@kmob.com
eOAPilot@kmob.com

Office Action Summary	Application No. 10/684,917	Applicant(s) SMITH ET AL.	
	Examiner NIHIR PATEL	Art Unit 3772	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on applicant's remarks filed on 8/10/2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 12 is/are rejected.
- 7) ☒ Claim(s) 4-11 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/08/2003</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on August 10th, 2010 have been fully considered but they are not persuasive. First the applicant argues that one of ordinary skill in the art would recognize that the primary function of Nakamura is to convey fluid and the fact that the structure also includes a heater to prevent freezing is a secondary function. Nakamura does not teach a structure for heating per se. Even less does Nakamura teach a structure for heating a flow of gas within the structure is located. As a result one of ordinary skill in the art would not find it obvious to combine the teaching of Nakamura with Smith. In response to this argument the examiner would like to point out that the Nakamura reference is not relied for this limitation but rather for the outer layer being hydrophilic.

The applicant further argues that neither Smith nor Nakamura discloses an elongate heater wire within a conduit as required by claim 1. In reference to elongate wire the examiner disagrees with the applicant's argument. Column 3 lines 30-40 recites "The heater wire thus formed will retain its spiral configuration and maybe stretched the length of the conduit within the space between the inner tube and the surrounding tube." The fact that the wire is stretched from one end to the other implies that the heating wire is elongated. In reference to being located within the conduit inner and outer conduit are defined as one conduit and since the heating wire is sandwiched between the two conduits it is defined as within the conduit.

The applicant further argues that the apparatus of Nakamura is unsuitable to heat the breathing gases flowing in the conduit and to re evaporate any condensed water in contact with the heating wire. In response to applicant argument that Nakamura is unsuitable to heat the

Art Unit: 3772

breathing gases flowing in the conduit, the examiner is not relying on Nakamura for this limitation. In response to applicant argument that Nakamura is unsuitable to re evaporate any condensed water in contact with the heating wire, the examiner would like to point out that by providing the heating wire of Smith with an outer layer of hydrophilic as taught by Nakamura the device will re evaporate any condensed water in contact with the heating wire.

Finally the applicant argues that one of ordinary skill in the art of respiratory conduits would not actively look at or apply the teaching of Nakamura because it is from a different field and teaches something quite different to that of the claimed invention. First the examiner would like to point out that a heating element having an outer layer that is hydrophilic is not an art of respiratory conduit. A heating wire can be used in other art not just respiratory conduits.

Terminal Disclaimer

2. The terminal disclaimer filed on December 29th, 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US 6,662,802 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 3772

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims **1-3 and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over Smith et al. (US 6,536,428) in view of Nakamura (JP 11323899 A).

6. As to claims **1, 2 and 12**, Smith substantially discloses a conduit 4 for breathing circuit including heater **12** (see **figure 2; col. 3 lines 60-67 and col. 4 lines 1-28**) located within the conduit the heater comprising an elongate heating element covered with an inner electrical insulating layer (see **col. 3 lines 25-35**) but does not disclose an outer hydrophilic layer.

Nakamura discloses an apparatus that does disclose an outer hydrophilic layer **34** (see **fig. 1 and brief description of drawings**). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Smith's invention by providing an outer hydrophilic layer as taught by Nakamura in order to collect any water that collects in the conduit and to insulate the heater from the rest of the system.

7. As to claim **3**, Smith substantially discloses an apparatus wherein the heating means 12 lies freely in the conduit to settle over at least some of its length at low points in the conduit where condensed water vapor may collect (see **figure 2**).

Art Unit: 3772

Allowable Subject Matter

8. Claims **4-11** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art does not teach or suggest the conduit being an expiratory conduit and the heating means being located in an expiratory flow path of the conduit and at least a length of the conduit has a conduit wall wherein at least a region of the conduit wall is of a breathable material.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **NIHIR PATEL** whose telephone number is (571)272-4803. The examiner can normally be reached on 7:30 to 4:30 every other Fridays off.

Art Unit: 3772

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patricia Bianco can be reached on (571) 272-4940. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nihir Patel/
Examiner, Art Unit 3772

/Patricia Bianco/

Supervisory Patent Examiner, Art Unit 3772